

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An isolated gene encoding a polypeptide which is a human 116-kDa osteoclast proton pump subunit, wherein the gene comprises a nucleotide sequence consisting of SEQ ID NO: 1.
2. (Cancelled)
3. (Currently Amended) An isolated ~~DNA~~ polynucleotide encoding a polypeptide which is an osteoclast 116-kDa proton pump subunit, wherein said polynucleotide comprises and comprising the nucleotide sequence of SEQ ID NO: 1 or its complementary nucleotide sequence.
4. (Currently Amended) A ~~The isolated DNA encoding a polypeptide which is a human osteoclast proton pump subunit and which~~ polynucleotide of claim 3, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:3 SEQ ID NO:2.
5. (Currently Amended) An isolated ~~DNA~~ polynucleotide encoding a polypeptide which is an osteoclast proton pump subunit, wherein said polynucleotide comprises comprising a nucleotide sequence selected from the group consisting of:
  - a) SEQ ID NO: 1 or its complementary nucleotide sequence; ~~and~~
  - b) nucleotide sequences which hybridize under conditions of medium stringency to the nucleotide sequences of (a); and
  - c) nucleotide sequences which hybridize under conditions of high stringency to the nucleotide sequences of (a).
6. - 29. (Cancelled)
30. (Currently Amended) The polynucleotide of ~~claim 17~~ claim 3, wherein said polynucleotide is operably linked to a regulatory sequence.
31. (Currently Amended) The polynucleotide of ~~claim 25~~ claim 5, wherein said polynucleotide is operably linked to a regulatory sequence.

32. (Currently Amended) A cell comprising the polynucleotide of ~~claim 17~~ claim 3.
33. (Currently Amended) A cell comprising the polynucleotide of ~~claim 25~~ claim 5.